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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,145	08/14/2006	Hartmut Sauer	68001-006US1	1766
69713 7590 03/11/2009 OCCHIUTI ROHLICEK & TSAO, LLP 10 FAWCETT STREET CAMBRIDGE, MA 02138				
EXAMINER				
MCNEIL, JENNIFER C				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
03/11/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INFO@ORTPATENT.COM

Office Action Summary

Application No.

10/553,145

Applicant(s)

SAUER, HARTMUT

Examiner

JENNIFER MCNEIL

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/26/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20, 25 and 26 are provisionally rejected on the ground of nonstatutory

obviousness-type double patenting as being unpatentable over claims 1-20, 23, and 24 of copending Application No. 10/553,147. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims differ only in the recitation of intended use (decorative part versus electronic part). The recitation of the intended use is not considered to delimit the claims structurally. Furthermore, a decorative part may also be considered an electronic part and vice versa, such as a cell phone casing.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "having an adhesive strength". It is not clear if this refers to the metallic layer or to the non-metallic substrate. It appears that applicant is referring to the adhesion between the metallic layer and the non-metallic substrate. It is noted that "substrate" is not considered to be the article as applicant appears to intend that the article itself may or may not be the non-metallic substrate as reflected in later claims 4 and 5. If this is not consistent with applicant's intent, please clarify the claims.

Claims 6, 7, and 10 refer to "the boundary" in line 2 which lacks antecedent basis.

Claims 16 and 17 refer to "the metal layer" in line 2 which lacks antecedent basis.

Claim 24 uses "or" twice in the alternative grouping which renders the grouping indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, 15, 16, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Jansson (US 4,231,982). Jansson teaches a tool comprising a non-metallic substrate containing at least one polymer (thermosetting plastic material 15), and a metallic layer (wearing coating 14 of metal or metal alloy) present thereon and deposited without electric current (abstract, col. 1, lines

41-68l col. 2-col. 3, line 14 and Figures 1-3). While Jansson does not specifically teach an adhesive strength of 4N/mm^2 , as the materials and methods used by the reference are commensurate with those of the instant application, and Jansson recognizes "an intimate adhesion is effected" and "the wearing coating adheres in an outstanding matter", the adhesion is considered to be commensurate with the instant claims absent a showing otherwise. Regarding claim 8, the non-metallic substrate may be fiber reinforced with materials such as carbon fiber or quartz (col. 2, lines 14-19). Regarding claim 16, the metal layer may comprise steel which is considered an alloy.

While Jansson teaches a tool, it is considered capable of functioning as an electronic structural part such as a housing or surface for an electronic part.

Claims 1-5, 8, 12-15, 17, 24 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Belouet et al (US 2003/0031803). Belouet teaches a method for metallizing a substrate part. The part may be used in PCBs, antennas, microchip cards, etc. (0004). Belouet teaches a substrate made of a polymer to which is applied a layer of composite material of a polymer doped with dielectric particles. Autocatalytic deposition of a copper layer follows the formation of the first layer. A specific adhesion of 1.4 kg/mm^2 which converts to 13.8 N/mm^2 is taught for the copper layer (0044). The polymer/dielectric layer is formed without electric current being applied, and the copper layer is not formed by thermal spray, CVD or PVD. Regarding any standard deviation of the adhesive strength, as similar materials and methods are used, and given that the overall adhesion is commensurate, any deviation along the surface is expected to be similar to the claimed invention. Regarding claims 4 and 5, both scenarios are taught by the reference (0042 and 0047 and 0053). Regarding claim 8, the substrate may be reinforced with glass fibers (0056). Regarding claim 12, the

polymer matrix may include polycarbonate, and polyimide (0028). Regarding claim 14, the polymer matrix may include polypropylene (0028).

Claims 1-5, 12, 13, 15, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 656,397). “397 teaches a process which coats the surface of a polymer substrate, including a polystyrene (page. 1, lines 10-15) with a metal, wherein the process does not use external current. As similar materials and methods are used, the adhesion properties are expected to be commensurate with the instant claims. Regarding claim 5, the reference teaches forming metal onto the plastic layer and then further coating the metal by electroplating (page 3, lines 95-110). While the reference does not specifically teach an electronic housing, it is considered capable of functioning as an electronic structural part such as a housing or surface for an electronic part.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belouet et al (US 2003/0031803). Belouet teaches achieving very smooth surfaces with the use of dielectric nanoparticles but does not specify the surface roughness. It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the smoothness (roughness) of the non-metallic surface to promote increased adhesion of the metallic surface thereto. As the instant claims

recite “less than” ranges, it is considered to be consistent with the desire of Belouet to have a smooth surface (low roughness).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belouet et al (US 2003/0031803) in view of Shaw (US 4,643,940). Belouet teaches a fiber reinforced plastic material but does not specify the size of the fiber. Shaw teaches suitable glass fibers for reinforcing plastic materials with a fiber diameter of around 70 microns (col. 3, lines 37-45). An example of a 3 mm fiber length with an aspect ratio of 40 gives a diameter of approximately 70. The materials of Shaw provide a desirable light weight sheet with high flexural strength and stiffness. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the reinforcement material of Shaw in the article of Belouet to impart increase strength to the article. Regarding claims 10 and 11, it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the smoothness (roughness) of the non-metallic surface to promote increased adhesion of the metallic surface thereto. As the instant claims recite “less than” ranges, it is considered to be consistent with the desire of Belouet to have a smooth surface (low roughness).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jansson (US 4,231,982) or Belouet et al (US 2003/0031803) in view of Giltrow (US 3,674,689). Belouet and Jansson both teach a fiber reinforced plastic material but does not specify the size of the fiber. Giltrow teaches carbon fiber reinforced substrates with fiber diameters of 5-15 microns. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the reinforcing material of Giltrow in the article of Belouet or Jansson as Giltrow teaches that the material results in low shear rates.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belouet et al (US 2003/0031803) in view of Metzger (US 3,617,363). Belouet teaches a method for metallizing a substrate part with the formation of an electroless copper layer. Belouet does not teach the formation of the copper with non-metallic particles therein. Metzger teaches electroless formation of a copper layer with non-metallic particles such as silicon carbide, sulfides, organic resin powders, and molybdenum sulfide. The particles impart a wear resistance to the layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to add particles as taught by Metzger to the layer of Belouet to impart wear resistance thereto.

Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belouet et al (US 2003/0031803) in view of Suzue (US 6,088,947). Belouet teaches a method for metallizing a substrate part with the formation of an electroless copper layer. Belouet does not teach formation of a layer of aluminum or titanium or several other layers. Suzue teaches the formation of a metal film of aluminum or titanium to form a desired coloration on an exterior of an article. The aluminum layer has a high refraction factor so that the exterior is bright (col. 15, lines 18-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the layer of Suzue to the article of Belouet to modify the aesthetic design of the exterior via color or brightness. Additionally, the substrate of Suzue may be a polymer. Regarding claim 22, additional metallic layers may be formed. Specifically, Ni and Ti layers may be formed, or a plurality of films made of the metallic materials recited in lines 25-28 of col. 10 may be used to form the decoration film (203). Regarding claim 24, one of the film materials may be alumina and it would have been obvious to form the decorative layers of materials to achieve the desired coloration or aesthetic effect.

Response to Arguments

Applicant's amendments have overcome the 112-2 rejections over "use", "in particular", and alternative language. However, new 112-2 issues are addressed above as well as art rejections. This action is non-final.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is 571-272-1540. The examiner can normally be reached on Monday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794